THE ENDOCRINE SOCIETY

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TESTIMONY

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Representing:
The Endocrine Society

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Topic:
Conquering Obesity:
The U.S. Approach to Combating this National Health Crisis

The mission of The Endocrine Society is excellence in hormone research and care of patients with endocrine disease.

To achieve this mission, the Society will continue to be the prime advocate and integrative force for clinicians and investigators, and will maintain a leadership role in providing endocrine education and information to the diverse professional endocrine community, the broader medical community, policy-makers, patients, and the public.

Statement of Daniel Spratt, M.D.

Before the House Government Reform Subcommittee on
Human Rights and Wellness

September 15, 2004

Mr. Chairman and members of the subcommittee, I would like to thank you for the opportunity to testify before you today. I am Director of Reproductive Endocrinology as well as an Endocrine Researcher at Maine Medical Center. Every day in my clinical practice I treat both adolescents and adults with obesity related problems. I am here today as the Chairman of The Endocrine Society's Government Relations Committee. The Endocrine Society is the world's largest and most active professional organization of endocrinologists representing over 12,000 members worldwide.

I will be primarily addressing issues of research and obesity today. In other presentations today, you have heard the magnitude of the obesity problem in the United States. Our Society has provided the subcommittee with copies of our obesity guide, *The Endocrine Society Weighs In: A Handbook on Obesity in America*, which provides additional details. In this handbook you will find basic facts and statistics on obesity, the role of endocrinology, exciting new research findings and other resources for easy reference. In response to the alarming rise in obesity rates, The Endocrine Society has taken several important steps to increase scientific and public awareness of the obesity crisis. In June, the Society chose to focus our annual meeting on the topic of obesity. The meeting brought together 9,000 researchers and practicing physicians to share recent breakthroughs in obesity research and treatments for those suffering from obesity. In addition, we have taken steps to educate the press, Congress and the public about obesity.

The federal government has also set in motion efforts to begin to tackle the obesity problem. The CDC has identified obesity as the number two preventable cause of death among Americans, trailed only by tobacco use. Secretary Thompson has taken the first steps to classify obesity as a disease. NIH Director Dr. Zerhouni created the NIH Obesity Research Task Force. The Task Force's Strategic Plan for Obesity Research, released in February of this year, calls for NIH to undertake research exploring preventing and treating obesity through lifestyle modification, pharmacological and surgical approaches and research that further examines the link between obesity and its associated health conditions.

It is clear that we are struggling to identify the main cause of obesity. Is it genetic, is it cultural, is it environmental? The truth is there may be no one cause of obesity, but rather a combination of many with different combinations in different individuals. What we do know is that more than 64 percent of Americans are overweight or obese. Most alarming is that childhood obesity has tripled since 1970. In addition, there is now clear and compelling evidence that racial and ethic minorities, as well as those with lower socioeconomic status are disproportionately affected by obesity and related aliments such as diabetes. While we should not single out one cause of obesity I have been asked today to update the committee on current research being conducted by those in the field of endocrinology.

As metabolic specialists, endocrinologists are actively engaged in the study, management and treatment of obesity and related diseases. In both the clinical and basic research setting, they

evaluate the hormones that regulate appetite, metabolism and energy balance. Endocrine researchers are attempting to determine the root causes of obesity and define the most effective measures to prevent, as well as combat, the condition. Ongoing research is attempting to identify the mechanisms that impact appetite control, food preferences and glandular malfunctions. One such endeavor resulted in the discovery of the hormone Leptin by Jeff Friedman at the Rockefeller Institute that opened a whole new dimension to the field of obesity. Leptin is a substance produced by our fat cells that travels in the bloodstream to the brain where it is one of the controls on appetite. This terrific discovery established the principle that fat cells can communicate with the brain and influence metabolic processes. Since this discovery there have been many more discoveries demonstrating that other organs such as the pancreas, the GI tract, in addition to fat cells, can produce substances that control appetite and metabolism.

It is also worth noting that breakthroughs in obesity research have resulted from what we call "broad-based" research - research that is conducted without a particular goal established at the onset of the research. For example, scientists at Massachusetts General Hospital have scoured thousands of genes in the C. elegans worm and have come up with hundreds of promising candidates that may determine how fat is stored and used in a variety of animals. These genes can then be used as predictive tools for finding their human counterparts and then assessing their functional significance. The decision to characterize the worm genome was not made with obesity in mind, but more for the general belief that deciphering its genome would have some payoff down the road. We must continue to support broad-based research in all fields of science, as some of the most prolific breakthroughs in science have been serendipitous.

As you may know, there are currently only two FDA approved drugs for the long term treatment of obesity. Neither is fully effective. Clinicians routinely prescribe medication to treat the comorbidities of obesity such as hypertension, diabetes, cardiovascular disease, and reproductive disorders, but we have very few pharmaceutical options to treat obesity before it results in these comorbidities. We, as doctors, and the American population, as patients, need better medications based on the knowledge we will gain from our basic and clinical research.

We believe that obesity research should be continued at three levels. First, basic research should continue to better understand the body's complex mechanisms of storing and utilizing energy. Second, transitional research should move these basic discoveries into trials of clinical treatments. Our evolving knowledge will provide numerous opportunities for better diagnostic, pharmaceutical, surgical, nutritional, and behavioral approaches. Finally, as these approaches are implemented in the obese population, outcome or impact research should be designed and put in place to assess efficacy.

We are right at the threshold of understanding how our bodies control weight and how we might use this knowledge to cure obesity. It is imperative that we continue our public and private investment to translate these breakthroughs in basic and clinical research into treatments for those who suffer from obesity and its related aliments. Thank you for inviting me to testify today and I thank the committee for furthering the public discourse on the growing epidemic of obesity.